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ABSTRACT

This annotated bibliography of 90 post-1970 United States Government Documents and some Texas State Documents on energy conservation for the non-scientist provides overviews and analyses of the general energy situation and the energy crisis, U.S. energy policy and legislation, governmental and individual conservation measures, and alternative future sources of energy. The items were selected for use by high school and undergraduate students, and teachers and librarians working with these groups; the document search strategy and an overview of the findings are discussed. Most of the publications listed are depository items, and many are for sale by the Government Printing Office: Superintendent of Documents classification numbers are included. (CWM)

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# ENERGY DOCUMENTS FOR THE LAYMAN:

# AN ANNOTATED BIBLIOGRAPHY

by

Gene Rollins

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## PURPOSE AND SEARCH STRATEGY

The purpose of this subject bibliography is to pull together recent, timely, and readable U.S. and Texas government documents on the subject of energy conservation. Through conversations with librarians, educators, and my own experience with the general public in public libraries and undergraduate students in academic libraries it became apparent that there was a need for a biliography on the subject of energy conservation aimed at these user groups. Government documents on the subjects of energy and energy conservation run the gamut from publications prepared for use by preschool children to those of a highly technical nature which can be fully understood only by scientists. The former type of publication is of little value to the student working on a paper or the homeowner who is considering installing a solar heating system in his home. While the latter group of documents is readily accessible to the user--bibliographic control for technical and research reports is provided by a number of both paper and online indexing and abstracting services--these documents are of minimal use to the layman.

There is, however, a whole middle-ground of excellent documents which are both highly informative and readily understandable by the non-specialist. Unfortunately, there is only one tool that can be satisfactorily used for accessing these documents: the U.S. Monthly Catalog. The Monthly Catalog, alas, is difficult at best for the uninitiated to use. This difficulty is compounded by the sheer amount of material that has been published on the subject of energy conservation. There are hundreds and hundreds of documents on the subject, and scores of citations appear in each issue of the Monthly Catalog since 1970. Sifting through this mass of sometimes ephemeral, frequently extremely technical publications would be apt to cause the searcher to reject documents as a source for

his information. And this would be unfortunate because documents on this particular topic are generally more accurate, informative, and authoritative than many of the commercial publications. In fact, documents are frequently used as the basis for the commercial publications.

To facilitate use of relevant documents by the searcher, this bibliography has attempted to bring together those documents which were considered the best available in terms of information content, clarity, and readability for the non-scientist. The bibliography should therefore be most useful to the high-school student, undergraduate student, or the average person with an interest in the subject of energy conservation in general, or a specific method of energy conservation in particular.

The subject of energy conservation is a relatively new area of interest. Few people in the U.S., and fewer still who published anything under the aegis of the U.S. Government, were concerned about the subject before the late 1960's. The Cumulative Index to the U.S. Monthly Catalog 1900-1970 yielded a smaller number of citations that was anticipated and few of them were really the sort that were needed. It seems that we were concerned with conservation of energy in the past mainly during the War. There are many documents on the subject of petroleum conservation which were designed to help the War Effort during World War II. Most of these were process documents, however, and would not be readily available to the searcher. The numerous data bases which are concerned with the subject of energy contain documents which are for the most part of a technical nature, and were outside the scope of this bibliography. The most relevant indexing tool for documents on the subject was the Monthly Catalog from about 1970 to the present.

This relatively small span of years nevertheless produced an incredible number of relevant documents. The number of citations per year

has increased exponentially over the period.

Until 1977 government documents on the subject of energy conservation were published by a very wide variety of Executive Departments and agencies. With the creation in August, 1977 of the Department of Energy the various agencies and subunits of Executive Departments concerned with energy were centralized within that Department. The Energy Research and Development Administration, the Federal Energy Administration, the Federal Power Commission, and the Alaska, Bonneville, Southeastern, and Southwestern Power Administrations were completely incorporated into the Department of Energy. In addition, some functions of the Bureau of Reclamation (Interior Department), Interstate Commerce Commission, Commerce Department, Housing and Urban Development, and the U.S. Navy were shifted to the Department of Energy. From late 1978 on, most of the documents that are on the subject of energy conservation emanate for the Department of Energy. Many of the very technical reports, as well as some of the general publications, still originate from other Executive Departments and Agencies.

Search terms used, in descending order of relevance, were: energy conservation, energy consumption, power resources, energy policy, energy crisis, energy plan, solar energy, atomic energy, nuclear energy, geothermal energy, thermal energy, heating, sun, and radiant energy.

The documents in this bibliography are representative but are by no means inclusive. Documents were selected in line with the above-mentioned criteria that (1) give an explanation of the causes and effects of the energy crisis, (2) help cope with the energy crisis by describing conservation and other measures which can be taken, and (3) describe the sources that are likely to be used in the future to satisfy our demands for energy.

Only those documents published after 1970 have been included in this bibliography. The documents published after this date reflect the current situation with respect to energy, as well as the current structure of the government agencies which are concerned with energy. Before 1970 energy conservation measures were of little concern to either the public or the government, and documents which dealt with this problem were almost exclusively of a very technical nature.

## OVERVIEW OF FINDINGS

There is no doubt that the energy crisis is real. Demand for energy is increasing at a rapid rate and no limit or levelling trend for this demand has yet occurred. Most of the energy is currently being produced from petroleum and natural gas. These resources are finite, and research indicates that at expected rates of depletion the reserves of the fuels will be exhausted by mid-Twentyfirst Century. The energy problem thus is fundamentally one of transition. Major changes must be made in order to accomplish the shift from an oil and gas based economy to one based in the short term on coal, and ultimately on renewable, energy sources. Further, these changes must be made rapidly and in ways which assure adequate protection for the environment.

The Oil Embargo of 1973 forced a somewhat premature, but inevitable rise in the price of petroleum products. These prices will continue to rise for the forseeable future and will cause economic dislocations such as inflation and spot shortages. There is no end in sight to this trend because the industrialized nations must depend on OPEC crude oil until they are able to convert to a non-petroleum based economy.

Alternative, non-petroleum sources of energy are becoming more economically feasible with the increased cost of production of petroleum. Until these new sources of energy are in place there are two levels--governmental and individual--on which the energy crisis must be addressed. On the governmental level, the National Energy Act is the vehicle by which solutions for the energy crisis are beign sought. This is being done through research and development of renewable energy sources, and through conservation. The major goals of the Act are:

1. Reduction of annual growth of U.S. energy demand to less than 2 per cent.
2. A reduction of the level of oil imports to less than 6 million barrels per day.
3. Achievement of a 10 per cent reduction in gasoline consumption from the 1977 level.
4. An increase in annual coal production to at least 400 million tons over 1976 production.
5. Insulation of 90 per cent of all American homes and all new buildings.
6. Use of solar energy in more than 2½ million homes.

Twelve Federal departments and agencies are conducting approximately 60 programs dedicated to energy outreach activities. The majority of these programs are now housed within the Department of Energy but a number of them are conducted by other Federal Departments and agencies. The goal of this effort is to get American consumers to use less energy.

It is on the individual level that the battle to survive the energy crisis will be won or lost. At least in the short term, there are many things that the individual can do which will significantly reduce the amount of fuel he consumes. Some of these require little effort, some require investment, and some are simply modifications to the lifestyle. These changes must be made in order to avoin chronic energy and fuel shortages until the changeover to alternative sources of fuel can be effected. Whether we as individuals and as a nation will make these changes and conserve energy is impossible to accurately predict. It is a certainty, however, that the coming years will be very unpleasant ones if we do not.

# ENERGY DOCUMENTS FOR THE LAYMAN: AN ANNOTATED BIBLIOGRAPHY

## Bibliographies

While many of the documents included in the other sections of this work have bibliographies appended to them which cite both government and often commercial publications, the following documents are bibliographies with little accompanying textual matter. The first three are made up exclusively of citations to U.S. Government documents.

E 1.28:HCP/M8656-01
The Resource File: Practical Publications for Energy Management. Dept. of Energy. 1978. 271 p.

This is a guide to handbooks, curricular, and audiovisual materials on all aspects of energy conservation. The publications are generally of practical interest to the general public. There are title and keyword indexes. Nearly all the publications in the bibliography are available through either SUDOCS or NTIS. SUDOCS numbers are not included, but the bibliography does include prices and GPO stock numbers for ordering.

GA 1.16:En2
GAO Energy Digest: A Bibliography Issued by the Comptroller General of the U.S. 1977. 216 p.

This work brings together all of the available unrestricted documents on energy-related matters that the General Accounting Office has issued from July 1972 through March 1977. The bibliography was mostly derived from GAO computerized data bases. Entries often include substantial abstracts and always tell you where the publication may be obtained. Especially interesting is the section on "Renewable Energy Resources." Appendices include major energy legislation, and federal information sources and systems on energy.

GP 3.22/2:009/3
Solar Energy. U.S. Government Printing Office. 1977. 8 p.

This is a GPO Subject Bibliography. The Subject Bibliographies consist of recent, high-interest materials published by the government on various subjects. Order information is conveniently included.

LC 33.9/2:So4
Selected References on Solar Energy.
LC 33.9/2:W72.
Selected References on Wind Energy. U.S. Library of Congress, Science and Technology Division, Reference Section. 1975.

A well-annotated list of materials on the subjects. These are not depository items, but are in some libraries as a result of DOCS EX and similar acquisitions techniques.

LC 33.10:74-3
Energy Crisis: An Overview. Kay Rodgers, Comp. U.S. Library of Congress, Science and Technology Division, Reference Section. 1974. 14 p.

Good bibliography of both U.S. and commercial materials on all aspects of the energy situation, both technical and political. Good political slants.

Energy Crisis: Overviews, Causes, Explanations, and Projections for the Future

Here are included federal and Texas state documents which give information about the past, present, and future of the energy shortage.

C 1.2:En2/4
CTAB Recommendations for a National Energy Program. Commerce Technical Advisory Board, Dept. of Commerce. 1974. 70 p. graphs.

The CTAB consisted of members from industry, the scientific community, and government. The report was designed to provide an independent source of advice for the interagency effort to develop Project Independence. It's recommendations were largely followed. Especially valuable are the Board discussions of energy demand and supply (for all types of energy sources). There are parts of the report that are rather technical but the executive summary and charts and statistical information are clear and succinct. Especially good as a research or term paper resource.

E 1.9:N38/draft
Networks: How Energy Links People, Goods and Services: Grades 4,5. Dept. of Energy, Technical Information Office. 1978. 102 p. ill.

This document consists of interdisciplinary student/teacher materials on energy, the environment, and the economy. It is useful because there are few comparable comprehensive works on the topic designed for this low reading level.

E 1.25:0020
Energy in Focus: Basic Data. U.S. Department of Energy. 1978. 13 p.

The booklet consists of data in tabular form on U.S. energy production, consumption, and prices. The statistics are taken from a variety of sources and illustrate the trends in the energy situation. The document was produced in January, 1978 and DOE claims that it will be updated "periodically." None have appeared as of this writing but they would be worthwhile to look for.

E 1.25:0023
Citizen Workshops on Energy and the Environment Handbook: Citizen Workshops, a Project of the U.S.D.O.E. Dept. of Energy, Office of Public Affairs. 1978. 32 p.

A booklet written in very simple language about why we have an energy crisis, and why we need to use clean energy (not coal or petroleum) to protect the environment. The exotic energy sources are briefly described, but nuclear seems to be the answer to a maiden's prayer.

E 3.2:G21/2/967-78
Motor Gasoline Supply and Demand 1967-1978. Dept. of Energy. 1978. 36 p.

Tabular data reviewing historical and present production, imports, etc. of gasoline and forecasts near-term supply and demand.

FE 1.2:En2/7/summ.
National Energy Outlook 1976: Executive Summary. Federal Energy Administration. 1976. 14 p. color ill.

This is the summary volume of the lengthy 1976 National Energy Outlook. The graphic analyses of projected demands are accurate, but some of the conclusions in the report for solving the energy crisis were later criticized by the Congressional Research Service and the General Accounting Office as being overly optimistic. This summary is therefore chiefly of interest because it is a slick 4-color presentation which can be easily understood by high-school students. It should not be used alone, however.

HH 1.2:En2/15/summ.
Residential Energy Consumption Detailed Geographic Analysis: Summary Report. Dept. of Housing and Urban Development. 1977. various pagings.

This is the summary volume for a series of reports on residential energy use in 11 U.S. cities (one of them, Houston, is in Texas). Building trends and practices were identified for single-family, townhouse, low-rise, and high-rise residences. The trends and practices were correlated with energy consumption in the cities. Three major conclusions resulted from the study, chief of which was that current building practices are not in the best interest of energy conservation. Ways to improve the practices are discussed.

I 1.2:En2
U.S. Energy, Summary Review. Dept. of the Interior. 1972. 42 p. ill.

This document is one of the earliest that discusses the overall energy situation and reports on alternative sources of fuel. It shows that, at least Interior, was concerned about "the difficult and serious energy situation" before the situation became a "crisis."

I 1.2:En2/4/971
U.S. Energy Fact Sheets, 1971 [by states and regions]. Dept. of the Interior. 1973. 138 p. ill.

This document consists of a series of tables which give coal, petroleum, natural gas, and nuclear reserves, as well as production and consumption information by state and region. The tables are straightforward. Texas is on pages 96 and 97.

I 1.2:En2/6/976
Energy Perspectives 2. Dept. of the Interior. 1976. 225 p.

This is an extremely useful document. It consists of maps, tables, and graphs on nearly all aspects of the subject of energy: resources, consumption, production projections, etc. are given for the U.S. and the world. There are brief explanatory texts accompanying the data so that they are easy for anyone to understand.

PrEx 3.10:En2
The International Energy Situation: Outlook to 1985. Executive Office of the President. 1977. 18 p.

This booklet was produced by the Central Intelligence Agency and concludes that world demand for oil will approach productive capacity by the early 1980's and exceed it by 1985. Even with conservation, rationing will be accomplished through high prices for petroleum. The report is written in plain language and will be understood by nearly all age groups.

PrEx 8.2:En2
Energy Research and Development and National Progress. Executive Office of the President, Science and Technology Office. 1976. 437 p. ill.

Mainly tabular data, but tables are arranged in a clear and straightforward manner. The report gives the breakdown of the amount of energy consumed by different states and sectors of the economy. Also includes energy used by large and small appliances and in other parts of the residential sector.

Y4.Ec7:En2/4
Energy Outlook for the 1980's, study prepared for use by the Subcommittee On Economic Progress. By Dr. W. N. Peach. 1973. 39p. ill.

This is a brief and succinct report with an adequate table of contents that can be used as an index, there is also a list of tables. The heading on the table of contents reads "Energy Outlook for the 1970's" but this is a misprint. The report itself exhibits much more care than did the typesetter. Exotic sources of energy are not discussed. Non-competitive practices by the petroleum industries, however, are.

Y4.In8/4:En2/9/976-85
U.S. Energy and Supply, 1976-1985: Limited Options, Unlimited Constraints, A Report. By Herman T. Franssen, Congressional Research Service. 1977. 146 p.

This CRS report deals with the projected demand and sources of energy supply through 1985. The report is critical of the over-optimistic reports prepared by FEA for its "Project Independence." This CRS report discusses the following options for replacing petroleum as an energy source: coal, nuclear, geothermal, synthetic fuel, shale oil, ocean geothermal, and solar. The report also compares and contrasts (and criticizes) the energy outlook studies made by Exxon, Shell Oil Co., and MIT. Included as well are synopses of the GAO's, OTA's, and CRS's analyses of President Carter's Energy Plan. The table of contents serves as an index.

Y4.In8/4:En2/10
Energy Information Digest. U.S. Congress. 1977. 210 p.

This document provides basic, summary information on energy resources, consumption, production, costs, industrial concentration, and transportation.

(Texas Documents)

G 978.8 En27 o
Texas Energy Outlook: The Next Quarter Century. Governor's Energy

Advisory Council. 1977. 167 p.

G978.8 En27o summ.
Texas Energy Outlook: Executive Summary. 1977. 16 p.

Through text, charts, and graphs this document forecasts supply and demand, consumption patterns, and costs to consumers of energy for the state of Texas. Some attention is also paid to the U.S. as a whole.

G 978.8 En27t
Texas Energy: A Twenty-Five Year History. By Marla Stevens and Ginny Cummings. Governor's Energy Advisory Council. 1977. 156 p.

A mainly tabular treatment of Texas Energy resources and consumption. The tables have adequate textual explanation for easy reading. A good analysis of pre- and post-1970 energy trends in the state.

Z UA 220.8 En27r
Energy Resources of Texas 1976. Bureau of Economic Geology, University of Texas at Austin. 1976. map.

This is a color coded map showing what resources (petroleum, natural gas, lignite, uranium, and bituminous coal) are in what regions of Texas. It is unfortunate that the costs of publishing this map prevented its being made more widely available.

## Energy Crisis--Impacts on Special Groups

These documents show the direct and indirect impacts of the energy shortage on subgroups of the population. The documents listed here make it easier to learn the impact on special groups when the searcher is more interested in the group than the problem overall. There were very few documents that dealt exclusively with special groups--most attempted to treat the affects of the energy crisis on all segments of the population.

CSA 1.2:C67
Colder . . . Darker: the Energy Crisis and Low Income Americans. Community Services Administration ("by Eunice S. Grier"). 1977. 75 p.

The report examines how American low income households have been affected by the energy crisis. It is based on two surveys conducted in 1973 and 1975 by the Washington Center for Metropolitan Studies. The report analyzes both the impacts and options open resulting from the crisis. Found that the poor consume proportionally far less energy than other groups. Conservation efforts are mostly centered around household heating.

Y4.Ag4:En2/pts. 1-6
The Impact of Rising Energy Costs on Older Americans: Hearings before the Special Committee on Aging. U.S. Senate. Held April 5-7, 1977. Includes a bibliography.

The terribly harsh experiences--especially death by freezing--inflicted upon older Americans by the energy crisis are reported on in this hearing, with a view towards programs to help older Americans cope with the energy crisis. All economic impacts on the aged are discussed. CIS is the only indexing tool for the document (table of contents is inadequate).

(Texas Documents)

G 978.9 R299 77-03-01
"Testimony Before the Senate Human Resources Committee Concerning Individual Metering of Apartment Houses. Bill Cepeda. 1977. 4 p.

This is a transcript of Cepeda's remarks before the committee. Cepeda is on the Governor's Energy Advisory Council. He discusses the desirability of individually metered apartments because of their conservation potential. He also encourages adoption of a building code which will encourage insulated apartment construction. This document is of interest because it is succinct: will give the interested individual alot of information in a hurry.

## Energy Conservation--What Federal, State, and Local Governments are Doing About It

To solve our energy problems, we must attack the energy crisis on two levels: government and individual. This section of the bibliography contains documents that state and explain (and criticize, sometimes) official government policies for solving the energy crisis in the long run, and short-term methods that governments on all levels are taking to cope with the present scarce and expensive fuel supply.

E 1.8:B85
A Guide to Reducing . . . Energy Use Budget Costs/Energy Projects of the National Assoc. of Counties, National League of Cities, and the U.S. Conference of Mayors. Dept. of Energy. 1977. 93 p. ill.

This is a guide developed for local governments on the muncipal and county levels. It shows ways in which local governments can reduce their energy bills. Programs are targetted at employees, vehicle fleets, and buildings and services. Some of the suggestions may meet with some resistance (e.g. "reduce waste pick up from twice to once a week"). Useful especially for students of public administration and public libraries.

E 1.25:0003
DOE Information Kit: The National Energy Act. Dept. of Energy, Office of Public Affairs. 1978. various pagings.

This document analyzes and explains the major provisions of the National Energy Conservation Act of 1978. Each of the five major bills which comprise the act is discussed. The reasons for the provisions of the various parts of the Act are given and the expected results are outlined. This is probably the explanation of the National Energy Act

yet published that is written in the best non-legaleeze.

GA 1.13:EMD-78-24
More Attention Should be Paid to Making the U.S. Less Vulnerable to Foreign Oil Price and Supply Decisions: Report to the Congress. General Accounting Office. 1978. 97 p.

This GAO report found that major oil companies, out of commercial necessity, seek to ensure their own access to crude oil supplies by entering into long-term agreements with producing countries. These agreements help stabilize the sales of individual OPEC countries, thus counteracting tendencies toward disunity and lending further strength to OPEC. The report also concludes that U.S. impotence in the petroleum marketplace may be more apparent than real, and recommends U.S. policy changes and changes for specific agencies.

GS 4.110:95-617, -618, -619, -620, -621
The National Energy Act. U.S. General Services Administration. Public Laws (slip laws.) 1978.

95-617 The Public Utilities Regulatory Policies Act [92 STAT. 3117]
95-618 The Energy Tax Act of 1978 [92 STAT. 3207]
95-619 The National Energy Conservation Policy Act of 1978 [92 STAT. 3207]
95-620 The Powerplant and Industrial Fuel Use Act of 1978 [92 STAT. 3289]
95-621 The Natural Gas Policy Act of 1978 [92 STAT. 3351]

These five public laws comprise the National Energy Act that was passed by Congress and signed into law by President Carter. The National Energy Act was passed by Congress on October 15, 1978 after almost 1½ years of deliberation. This Act is the official means by which the U.S. as a nation is working to solve the energy problems of this country. The Act is not terribly difficult to read, but the tax provisions may be difficult for the casual reader to understand. For a simplified explanation of the Act, see E 1.25:0003, above. The brackets contain the citations for these laws in Statutes at Large.

H. Document 95-138 (95-1)
National Energy Act: Communication from the President of the United States. U. S. Congress. House. 95th Congress 1st sess. 1977. 283 p.

This is a draft of the proposed legislation by President Carter to establish a comprehensive national energy policy. National energy goals are stated as well as the pricing, regulatory, tax, and non-tax provisions proposed by the President to reach these goals. The goals of the national energy policy are: 1. reduction of annual growth of U.S. energy demand to less than 2%. 2. reduction of the level of oil imports to less than 6 million barrels per day. 3. achievement of a 10% reduction in gasoline consumption from the 1977 level. 4. insulation of 90% of all American homes and all new buildings. 5. an increase in annual coal production to at least 400 million tons over 1976 production. 6. use of solar energy in more than 2½ million homes. It is interesting and instructive to compare Carter's plan with Fords' and the National Energy Act that was ultimately passed by Congress.

HE 19.108:En2
A Selected Guide to Federal Energy and Educational Assistance. HEW, Office of Education, Energy and Education Action Center. 1978. 18 p.

In tabular form, federal financial programs are listed which are of interest to anyone studying, teaching about, conducting an information outreach program, researching or data collecting on the subject of energy or retrofitting. The table states the amount of aid available, and how to apply for the aid or grant.

PrEx 4.2:En2
Potential for Energy Conservation, Staff Study. Executive Office of the President, Emergency Preparedness Office. 1972. 259 p. ill.

This study suggests that energy conservation measures can greatly reduce U.S. energy demand by 1980. The most promising measures for accomplishing this are improved home insulation, more efficient air-conditioning systems, a shift from highway to rail transport, and for urban passengers a shift from automobiles to public transportation systems, also the introduction of more efficient equipment by the industrial sector. Includes many helpful graphs and tables. Perhaps if the measures had been implemented the situation today would be rather less serious.

Y4.Ec7:En2/13
Energy independence or interdependence, the Agenda with OPEC. Hearings Before the Subcommittee on Energy of the Joint Economic Committee. U.S. Congress. 95-1, Jan. 12-13, 1977. 224 p. ill. bibliography.

What to do about OPEC? In these hearings that and other questions about OPEC are raised. Many interesting points are brought out. For instance, there has been substantial support of the OPEC cartel by the U.S. government. Access is available mainly through CIS because there is no subject index included and the table of contents is fairly non-descriptive.

Y4.In8/13:92-1
President's Energy Message. 92d Congress 1st Session. June 15, 1971. 271 p. ill.

This is President Nixon's plan for a national energy policy. While there is no index, the table of contents can be used to locate areas of interest. Nixon's energy message can be compared with the National Energy Act of 1978.

Y10.2:En2/2
Energy Policy Alternatives. U.S. Congressional Budget Office. 1977. 83 p.

Discusses the background of the energy problem, the goals of a federal energy policy, and the means by which a federal energy policy can be implemented. Details alternative energy policy packages and costs. This document helps present the views of the legislative branch which are not always in accord with the wishes of the Chief Executive. Clear charts and tabular data make the report easily readable and informative.

(Texas Documents)

G 978.7 R299 77-06-01
An Analysis of President Carter's National Energy Plan. By Melton L. Holloway. Governor's Energy Advisory Council. 1977. 155 p. (unbound)

This document gives a detailed overview of President Carter's Energy Plan with particular emphasis on its impact in Texas. The report quantifies the impacts of the Plan on employment, personal incomes, gross national product, gross state product, energy costs to consumers, energy consumption, energy imports and exports, and tax collection.

G 978.8 N213e
National Energy Plan Analysis: A Texas Response. Governor's Energy Advisory Council. 1977. 196 p.

This document is a joint effort with the Texas Office of State/ Federal Relations. Provides yet another prediction of what the Carter plan will do to--and for--Texas.

G 978.8 En27c vols. 1-3
State of Texas Energy Conservation Plan. Governor's Energy Advisory Council. 1977 3(?) vols.

Vol. 1: no record of publication and could not be located. Vol. 2: Plan Report (204 p.) Report details the state's conservation program to coal in the face of the decline in oil and gas production, and outlines a plan for conservation strategies to be used until advanced energy sources can be developed. Vol. 3: Energy Savings Calculation (61 p.) Presents data, mainly in tabular form of potential energy savings that would result from the state's conservation programs.

Z UA 200.8 P915a
Preliminary Assessment of the President's National Energy Plan. University of Texas at Austin. 1977. 412 p.

This report was prepared by UT faculty members. It is actually a compendium of reports (usually of around 10 to 15 pages) by various members of the faculty. The table of contents can be used to reach the subject of interest: from divestiture of the oil companies, to taxes, to solar energy.

Energy Conservation-What You Can Do on Your Own

The documents in this section are about ways that private individuals can conserve energy in their own homes, businesses, and lifestyles, until renewable sources of energy are developed.

C 1.2:En2/2
Thirty-three money-saving ways to Conserve Energy in your Business. Dept. of Commerce. 1973. 8 p. ill.

This pamphlet is aimed at the small to medium-sized business operator. The different ways to save energy range from the novel ("use infrared heaters in warehouses") to the simple-minded (use fluroescent instead of incandescent light bulbs). The publication gives tips for different departments of the small business such as the administrative offices, warehouse, loading dock, etc.

C 1.2:En2/12
Total Energy Management for Hospitals. Dept. of Commerce. 1976. 78 p.
C 1.2:En2/13
Total Energy Management for Nursing Homes and Other Long-Term Care Institutions. 1976. 62 p.

The documents are designed to identify proven techniques for conserving energy and energy dollars in the institutions designated. They would be extremely helpful to people administering the institutions. It is possible that the series will be continued under Dept. of Energy to include other types of institutions in the future.

C 1.8/3:En2
Energy Conservation Handbook for Light Industries and Commercial Buildings. Dept. of Commerce. 1974. 16 p.

Stresses that because the business community uses about 2/3 of the nation's energy supply, we can achieve the most substantial energy savings by conservation in that sector. For both plant buildings and proccesses and equipment, points of energy conservation potential are identified, explained, conservation techniques shown, how long implementation can take, and how much energy savings can be expected to result are estimated. Essentially, a how-to for businessmen

C13.29/2:104
Window design strategies to conserve Energy. Dept. of Commerce, National Bureau of Standards. 1977. 206 p. ill.

Well designed windows can provide a net energy gain. Poorly designed windows can cause utility bills to skyrocket. This report provides design strategies to make windows more energy conserving. Siting strategy and glazing procedures are considered in addition to window design.

C 13.29/2:112
Window Blinds as a Potential Energy Saver: A Case Study. Dept. of Commerce, National Bureau of Standards. 1978. 82 p. ill.

Shading devices are one of the best ways to improve the energy conservation efficiency of windows, especially in older buildings. The document discusses various types of shades and the resulting energy and dollar savings. Photographs as well as charts, graphs, and other illustrations are included.

CSA 1.9:6143-7
No heat, No rent: An Urban Solar and Energy Conservation Manual. Community Services Administration. 1977. 90 p. ill.

Despite the title, this is a manual not about landlord/tenant relations, but on how tenement co-opers can use solar and conservation technology to save money. The manual helps to understand the basics of installing a low-cost energy program. Includes types, amount, and where to install insulation, windows, how and where to install solar collectors for heating and cooling, and where to get them. The manual is written in very basic language and includes many clear, helpful illustrations.

E 1.2:So4/3
Solar Hot Water and Your Home. Dept. of Energy. 1979. 14 p.

This booklet goes step-by-step through all the components of solar hot water systems. It is written in easy to understnad language with many illustrations. Shows the best angles and siting locations for collector panels. The bibliography includes sources for more information and directories of manufacturers. The booklet also explains what to look for in the warranty for a solar system.

E 1.8:H75
An Energy/Conservation Curriculum Guide for Home Economics Teachers. Dept. of Energy, Technical Information Center. 1977. 319 p. ill.

This is a contract report done for DOE by the University of Tenn. The guide is a combination of 1) an overview of the energy situation and background material on energy concepts and terminology, and 2) a complete guide to the energy uses and practices in the home, with emphasis on measures which could be taken to conserve energy. The guide is intended for use by teachers as a reference tool and teaching aid as well as for use by students who can use it as a self-instructional learning module. This is one of the few documents that is a comprehensive report written especially for comprehension by high school students.

E 1.25:0018
How to Improve the Efficiency of Your Oil-Fired Furnace. Dept. of Energy. 1978. 12 p. ill.

A brief pamphlet that discusses achieving optimum efficiency for oil furnaces. Other pamphlets in the series include insulating water heaters, automatic thermostat controls, etc.

E 1.25:0039
How to Save Money by Saving Energy. Dept. of Energy. 1978. 29 p.

Tells how to determine amount and kind of insulation needed in your area, sensible heating practices, types of appliances that are more efficient and explains how to use them more efficiently. The booklet also gives tips for automobiles. It includes a Heating Zone Map so that R values for insulation needs can be calculated. R values are the measure of thermal resistance or the ability to retard heat flow. The higher the R, the greater the insulating value of a material.

E 1.26:0001
Ever Heard of Retrofit? A guide for the Home Remodeler. Dept. of Energy. 1977. 22 p. ill.

"Retrofit" is used to cover all those renovations done to save energy. The document discusses procedures and ways to avoid the pitfalls involved in retrofitting homes built before 1960 when fuel was cheaper than insulation. The following 7 items were determined to be cost beneficial across the entire country: caulking & weatherstripping, storm windows and doors, attic insulation, wall insulation, underfloor insulation, maintenance of mechanical heat and a-c systems, cleaning and insulation of hot water systems.

E 1.26:0020
Tips for Energy Savers in and around the House, on the Road, in the Marketplace. Dept. of Energy. 1978. 46 p. ill.

This booklet contains a wealth of tips on how to save energy in all the aspects of life from yard work to doing the laundry to taking vacations. Most of the tips are mainly common sense (e.g. close off unoccupied rooms) but common sense about energy is something that we have lacked in the past. Especially helpful is a list of estimated "Annual Energy Requirements of Electric Household Appliances." It is on pages 32 and 33.

E 1.26:0041/(nos.)
Energy Audit Workbook for . . . Dept. of Energy, Office of Conservation and Solar Applications. 1978.

A series of booklets that assist building and plant owners and managers in performing their own energy audits in order to apply energy conservation measures wisely. The workbooks usually consist of 1) a list of changes that may be made at little or no cost, 2) step-by-step examples of energy saving measures, 3) a more complete list of measures that includes those requiring an investment, 4) a followup plan that makes "your energy savings both visible and ongoing." There are workbooks for apartment buildings, bakeries, bus stations, die casting plants, hospitals, hotels & motels, office buildings, restaurants, schools, and warehouses.

E 1.26:0042/1
An Introduction to Solcost. Dept. of Energy, Solar Technology Transfer Program. 1978. 16 p.

Solcost is a research and development project of DOE. It is a data base that can be accessed by anyone and can calculate system and costs performance for solar heated and cooled new and retrofit constructions, such as residential buildings and commercial buildings. Solcost can show optimum size and performance characteristics for solar heating, cooling, and hot water systems; show cost comparisons between solar and conventional systems including tax credit advantages, and perform heat load analyses for buildings. The data base is especially useful for contractors and builders, engineers, architects, educators, suppliers, researchers, and mortgage lenders and bankers. The booklet describes ways to acces the data base, ways to obtain the Solcost User's Guide, where Solcost handbooks and software copies of the data base can be obtained.

E 1.26:0042/2
Solcost Hot Water Handbook. Dept. of Energy, Solar Technology Transfer

Program. 1978. 16 p.

For those without access to timesharing computers, this handbook can be filled out and mailed to the Solcost Service Center and the results of the computer analysis will be mailed back to the users.

E 1.26:0042/3
Solcost Space Heating Handbook. Dept. of Energy Solar Technology Transfer Program. 1978.

same as above but for solar heating systems.

FE 1.2:An8/3
Energy Activities with Energy Ant. Federal Energy Administration. 1977 (?). unpaged.

Energy Ant was created by the FEA to tell young people about energy and how to use it wisely. All FEA documents with call no. FE 1.2:An8(. . .) are Energy Ant publications. They will be useful for parents, elementary school teachers, and children's librarians.

FE 1.2:H75
Home Energy Savers' Workbook. Federal Energy Administration. 1976. 29 p. ill.

This practical workbook can help you decide how much money to spend on cutting energy waste in order to save, taking into consideration the factors that make your home different from your neighbors'. Includes climate charts, tables and calculations that show how to find where energy dollars are being wasted and where they can be saved. Covers insulation, windows, caulking, fuel types, etc.

FE 1.2:M85
Energy Saving Electric Motors. Federal Energy Administration. 1977. 13 p. ill.

In 1972 over 570 billion kWh were used to power over 51 million electric motors. Similar HP category motors do not possess similar levels of efficiency. This booklet explains how owners of electric motors--industries, small business, and farmers--can determine both the efficiency of different electric motors and the optimum HP size for the load in question.

FE 1.8:M31
Total Energy Management: Practical Handbook on Energy Conservation and Management. Federal Energy Administration. 1976. 54 p. ill.

Most commercial buildings were designed when energy was very cheap. This booklet describes how owners of office buildings and small retail stores can use the concept and practical considerations of energy management systems which can make their buildings more energy efficient. The booklet explains how to conduct a building energy use survey and shows how to interpret (and what to do about) the survey results.

FE 1.8:T76
Trucker's Guide to Fuel Savings. Federal Energy Administration. 1976. 20 p.

This booklet is part of the public relations campaign to encourage truckers to save fuel. Scarcity of fuel itself and the fact that fuel is one of the largest direct operating costs for long-haul truckers are the arguments used for fuel conservation. There are 13 specific measures for using less fuel which are explained.

FE 1.22:18
Lighting and Thermal Operations, Energy Conservation Principles applied to Office Lighting. Federal Energy Administration. 1975. 299 p. ill.

This is a report on the past practices of lighting design which makes suggestions for changes that can be made to make lighting design more responsive to energy conservation in the future. It does not deal with retrofit.

FE 1.22:20
Guidelines for Saving Energy in Existing Buildings, Building Owners and Operators Manual. Federal Energy Administration. 1975. 300 p. ill.

The manual was prepared to help building owners, managers, and occupants conserve energy without being forced to invest large amounts of money to do so. The manual includes over 200 pages worth of such methods and indicates the amount of money each conservation measure can be expected to save for different geographic regions. The authors point out that the General Services Administration implemented these measures in its over 10,000 buildings which it operates and achieved an average annual energy savings of over 30%.

HH 1.2:En2/978
Be an Energy Miser in Your Home. Housing and Urban Development Dept. 1978. unpaged.

A typical list of energy saving tips put out by HUD. They are quite similar to other such lists. Includes a bibliography.

HH 1.2:So4/3
Solar Dwelling Design Concepts. Dept. of Housing and Urban Development and the American Institute of Architects Research Corp. 1976. 146 p. ill.

This is an excellant document which serves as an introduction for consumers, designers, and builders interested in solar heating and cooling. It is very good because it includes designs and photographs of actual solar homes and buildings. Also includes mobile and modular housing.

Y3.T22/2:So4/vol. 1, -vol.2
Application of Solar Technology to Today's Energy Needs. U.S. Congress, Office of Technology Assessment. 1978. 756 p. ill.

Volume 1 presents the results of an analysis of solar energy systems designed for homes, apartment buildings, shopping centers, industries, and small communities. Volume 2 gives the assumptions made and techniques used for conducting the analysis.

(Texas Documents)

Z TA 290.8 P691
Plain Talk About Buying or Building an Energy-Efficient Home: A Guide to Energy Savings for the New Home Buyer. Energy Advisory Service, Texas A & M University. 1977. 9 p.

Briefly discusses and shows with illustrations and photos some points to look for in determining if a home will be energy efficient such as: wall material and insulation, type of glass used, heating and a-c systems, attic ventilation, and air duct insulation. Also gives a cost-benefit analysis.

## Future Sources of Energy

It is clear that new sources of energy other than petroleum must be utilized in order to solve the energy crisis. The documents here explain alternate sources of energy for the future, and discuss the research and development that is being done on them.

E 1.19:0008
Final Report of the Ad Hoc Experts Group on Fusion. Dept. of Energy. 1978. 24 p.

The generation of electricity from fusion is one of only 3 inexhaustible energy sources that can significantly contribute to the solution of the long range world energy problem. The booklet reviews the current state of fusion energy research.

E 1.2:N27
Near Term Electric Vehicle Program. Dept. of Energy. 1978 20 p.

This document, in addition to its intrinsic interest, would be useful especially to the student. Electric cars are a viable solution to at least the gasoline part of the energy shortage.

E 1.25:0004
Energy Films on Conservation, Environment, Fusion, General, Geothermal, History, Nuclear, Solar, Transportation, for Television, Schools, Clubs, Meetings. Dept. of Energy. DOE Film Library. 1977. 8 p.

You can choose from a list of 25 films which may be borrowed from the DOE film library. Running time and date of production are given for each film. The booklet includes a form for reservations. Each film has a subject annotation. They are available from: DOE Film Library, Technical Information Center, PO Box 62, Oak Ridge, Tenn. 37830

E 1.25:0034
27 Energy Films on Coal, Conservation, Fusion, Geothermal, Nuclear, Solar, for Schools, Colleges, Universities, Libraries, and Industry. Department of Energy. 32 p. ill.

These films were produced by DOE as part of its information and educational program. The films may be borrowed free of charge from:

Energy Film library
DOE Technical Information Center
PO Box 62
Oak Ridge TN 37830

or purchased (prices are given) from:

National Audiovisual Center
National Archives and Records Service
General Services Admin., Order Section FF
Washington, D.C. 20409

All are 16mm, color, and running times are included with the subject content annotations.

ER 1.11: ERDA-77-32
Summary Report, Federal Wind Energy Program. Energy Research and Development Administration. 1977. 56 p. ill.

The Federal Wind Energy Program is designed to allow the earliest possible implementation of wind power. This document briefly describes what the program is doing in terms of: research and development, field-testing on large and small scales, and developing the technological capability of private industry so that wind energy systems can be made available for sale at the earliest possible date.

ER 1.11:ERDA77-47/(1-8)
Solar Program Asessment: Environmental Factors. Energy Research and Development Administration. 1977. 8 vols. ill.

contents: Vol. 1 Solar Heating and Cooling of Buildings. Vol. 2 Solar Agricultural and Industrial Process Heat. Vol. 3 Photovoltaics. Vol. 4 Solar Thermal Electric. Vol. 5 Solar Total Energy Systems. Vol. 6 Wind Energy Conversion. Vol. 7 Fuels from Biomass. Vol. 8 Ocean Thermal Energy Conversion.

This series of reports, written for the most part in fairly non-technical language, discusses possible hazards to health and to the environment of the eight federally funded non-nuclear energy sources. The word environment is somewhat misleading here: e.g. one possible environmental hazard of solar water heating is that the ethylene glycol transfer solution could leak into the potable water. The titles are fairly self-explanatory, except for "biomass". Biomass is energy obtained from burning material grown for that purpose (wood) on plantations. This series is useful for study because there are very few sources which discuss pollution and hazards from fuels other than coal, petroleum, and nuclear.

FE 1.2:So4/3
Buying Solar. By Joe Dawson. Federal Energy Administration. 1976. 76 p. ill. maps.

This publication is a must for anyone thinking of buying a solar energy system. It gives guidelines for buying systems, helps eliminate

risks, and gives information to the consumer which will help protect against fraud and deception. The document explains everything about solar systems from proper collector area and orientation for your geographic region to sample warranties.

I 63.2:En2
Clean Energy from Coal Technology. Department of the Interior. 1973. 43 p.

The key element of the Department of Interior's program to transform coal into clean energy is the conversion of coal to high-energy pipeline quality gas. This document explains the several procedures for gassification of coal so that the non-scientist can understand them. Coal gassification is a very important energy possibility for the U.S. because nearly half of the world's coal reserves are located in North America.

NS 1.2:W72/2
Wind Machines. By Frank R. Eldridge. National Science Foundation. 1975. ill. graphs.

There are many ways to get useful energy from the wind. This document provides a survey of the history, viability, and future potential of the various types of wind machines that may be used to help meet future energy demands.

PrEx 4.2:En2/2
Potential for Energy Conservation, Substitute for Scarce Fuels, Staff Study. Executive Office of the President, Emergency Preparedness Office. 1973. 114 p. ill.

The publication is a staff report on the feasibility of substituting coal for petroleum fuels. The summary and clear charts and statistical information make this document useful for undergraduates and high-school students for preparation of research papers, debates, etc. on the subject. The report deals with specifics of how much coal would be needed to substantially reduce dependence on oil. Does not deal with other sources of energy.

Y 4.Sci2:95/ss
Energy from Geothermal Resources. U.S. Congress. 1978. 165 p. ill.

This document covers most aspects of geothermal, beginning with a history of its use and continuing with its geology, technology, global distribution, economics, and environmental aspects. The document also reviews the legal and legislative aspects of geothermal energy.

(Texas Documents)

G 978.8 En27f
Texas Energy--Future Sources. G vernor's Energy Advisory Council. 1976. 16 p.

Because the Texas economy depends heavily on oil and natural gas energy, state officials and residents are very interested in the energy outlook for our existing resources and energy replacements. This document

gives an overview of petroleum production, and then explains the research and development projects in Texas for coal, nuclear, solar, wind, geothermal, and solid waste as energy sources.